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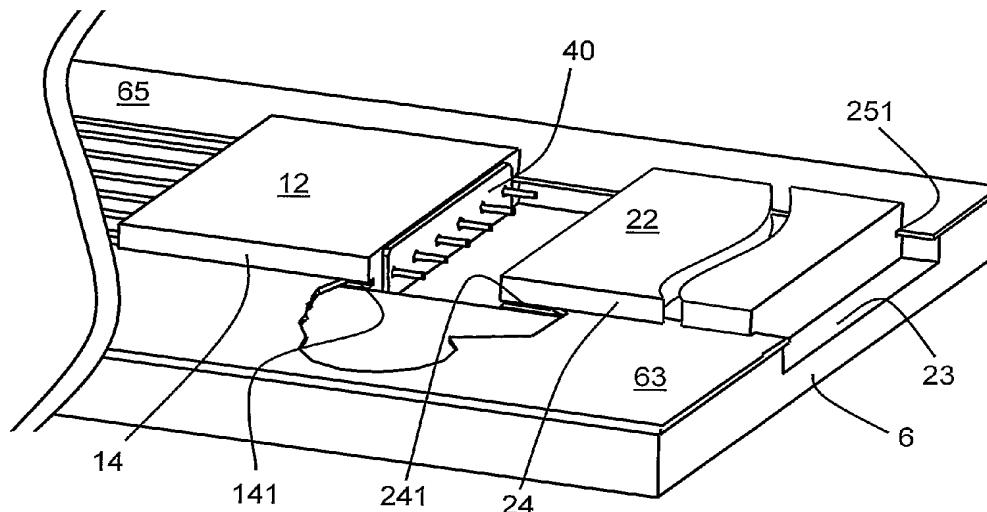
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(54) Title: MICROFLUIDIC CONNECTIONS



(57) Abstract: A junction is made between a first microfluidic substrate (12) having an elongate component (303) protruding from it and a second microfluidic substrate (22) having a corresponding conduit (261). Each of the substrates has a pair of alignment features, for example planar orthogonal surfaces (13,15; 23,25) or grooves (141,151; 241, 251) in opposite sides of the substrate. The substrates are placed on an alignment jig 6 having location features (63, 65) corresponding to the alignment features. The elongate component can be surrounded by a compressible gasket 40. The substrates are pushed towards each other so that the elongate component enters the conduit and the gasket, if any, is compressed. A fluid-tight junction results so long as the substrates are maintained in the necessary position, either by permanent means, or, if a junction which can be disassembled is needed, by maintaining pressure between the substrates. Novel apparatus and novel microfluidic assemblies, including microfluidic chips having grooves in their sides, are described.



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